



In May 2008, Governor Deval Patrick introduced the \$3 billion Accelerated Bridge Program to reduce the Commonwealth's growing backlog of structurally deficient bridges.



Governor Patrick signs legislation creating the Accelerated Bridge Program on August 4, 2008.

The Accelerated Bridge Program will dramatically improve the health of Massachusetts bridges and create thousands of jobs. The program will enable the Commonwealth to improve and replace landmark bridges such as the Longfellow Bridge (known as the Salt & Pepper Bridge) between Cambridge and Boston, the Whittier Bridge in Amesbury and to make much needed repairs to hundreds of others. Long-overdue investments in bridge preservation will extend the lives of bridges while spending taxpayer dollars in the most efficient way, eliminating both construction cost inflation and the expensive deterioration that comes with time. The Federal Highway Administration estimates that road and bridge construction costs increase from 9 percent to 15 per-

cent each year as a result of construction cost inflation alone. By completing projects sooner, the Commonwealth will avoid losing critical tax dollars to inflation.

Working collaboratively to apply innovative approaches to project development, construction cost and schedule controls, MassHighway and the Department of Conservation and Recreation (DCR) are well positioned to leverage best practices and share valuable expertise. Over each of the next eight years, these agencies will roughly double the investment that has been made in recent years in the Commonwealth's road and bridge programs. This effort will be overseen by the Accelerated Bridge Program Oversight Council, which will closely monitor the progress of the agencies and keep the public informed about the results.

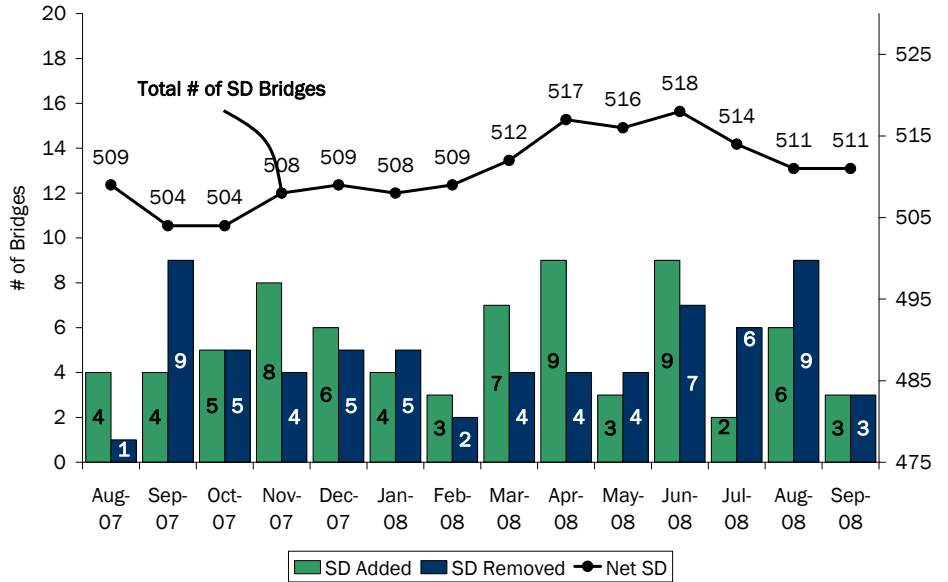
PROGRAM GOALS AND OBJECTIVES

- **Improve the Condition of the Commonwealth's Bridges**
 - Reduce the number of Structurally Deficient Bridges.
 - Improve the overall Bridge Health Index of Massachusetts Bridges.
- **Stimulate Economic Development and Job Creation**
 - Create thousands of jobs across the Commonwealth.
- **Save Money By Completing Projects Sooner**
 - Repair bridges now before further costly deterioration can occur.
 - Hedge against construction cost inflation.
- **Complete Projects Efficiently and Innovatively**
 - Complete projects on-time and on-budget.
 - Complete projects with minimum disruption to people and commerce.
 - Use Design-Build and other innovative contracting techniques.
 - Focus on preservation and other strategies to improve the long-term condition of all Massachusetts bridges.
- **Transparency and Accountability**
 - Provide frequent and detailed reports to the public on the progress of the ABP.
 - Develop overall project controls to ensure adherence to project schedules and budgets.
 - Measure agency performance in streamlining design and construction schedules.

HOW WILL THE ABP HELP?

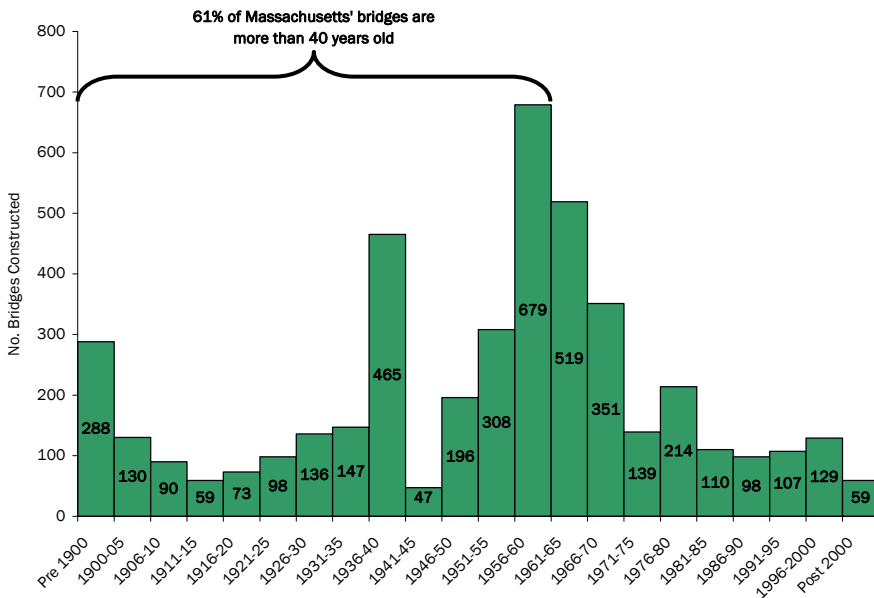
There are approximately 4,521 bridges in the Commonwealth, under the control of MassHighway, DCR or cities and towns. Safety inspections are completed on all bridges at least once every two years and unsafe bridges are closed immediately. Bridges that show significant enough deterioration to warrant a structurally deficient rating are inspected more frequently. It is these bridges that are targeted for improvement under this Program.

At the inception of the Accelerated Bridge Program in May 2008, inspectors had deemed 543 bridges structurally deficient. Because the rate of deterioration has been higher than the rate at which bridges are repaired, the number of structurally deficient bridges would be expected to reach approximately 697 over the next eight years without the Accelerated Bridge Program. The goal of the Program is to halt this trend and reduce the number of the Commonwealth's bridges that are structurally deficient to less than 450.



Trend in MassHighway structurally deficient bridges August 2007-present. Number of bridges entering and leaving SD status each month are noted.

Massachusetts has some of the oldest bridges in the United States. Many were originally built by the Works Progress Administration during the Great Depression, or as part of the construction of the Interstate Highway System in the 1950's.



Bridge Construction 1900–Present

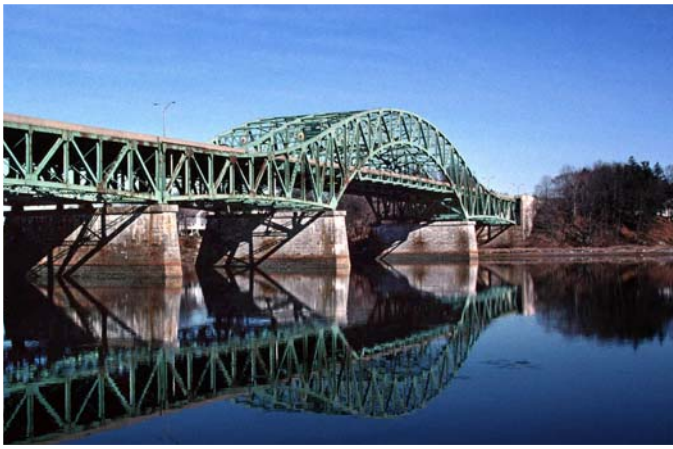
Many were originally built by the Works Progress Administration during the Great Depression, or as part of the construction of the Interstate Highway System in the 1950's. Lack of adequate investment, coupled with harsh New England weather conditions, makes it unsurprising that so many bridges are in need of repair. 61% of Massachusetts bridges were built prior to 1960, and 42% are between 40-60 years old. As a result of their age, many are in need of the significant investment provided by the Accelerated Bridge Program.

WHAT IS A STRUCTURALLY DEFICIENT BRIDGE?

A structurally deficient (SD) bridge is one for which the deck (driving surface), the superstructure (supports immediately beneath the driving surface), or the substructure (foundation and supporting columns and piers) are rated in condition 4 or less on a scale of 1-10. Structural deficiency does not necessarily imply that a bridge is unsafe. It does, however, mean that a structure has deteriorated to the point of needing repairs to prevent restrictions on the bridge.

For Program Updates Visit www.mass.gov/acceleratedbridges

ABP: LABORATORY FOR INNOVATION



The Whittier Bridge on Interstate 95 in Amesbury/Salisbury is a candidate for design-build delivery.

To realize the goals of the Accelerated Bridge Program, both MassHighway and DCR must find new ways to expedite projects. By using new strategies for project delivery and performance measurement, the agencies will make the Program a laboratory for innovation. As efforts are proven successful, they will be expanded and applied to the entire statewide road and bridge program.

MassHighway and DCR have already implemented a number of reforms aimed at streamlining operations and accelerating delivery of the Program. A dedicated chain of command focused specifically on delivering the Program on-time and on-budget has been established. Project control and streamlining reforms are being applied to the program and will generate measurable reductions in project delivery timelines.

Innovative Techniques to be used in the Accelerated Bridge Program

- **Incentive – Disincentive Contracts:** Time is of the essence in delivering this program. This approach will involve offering bonus payments to contractors which deliver projects ahead of schedule and imposing penalties for late delivery.
- **Design-Build Projects:** By allowing design and construction teams to work together from a project's inception, this approach will encourage completion of projects in shorter timeframes.
- **Project Bundling:** Assigning multiple similar projects to a single contractor can save valuable procurement time. Assigning construction projects along a corridor to one contractor maintains momentum for efficient delivery. For design, assigning multiple projects requiring a common design to a single consultant will expedite delivery.
- **Accelerated Bridge Construction Techniques:** The use of pre-cast, pre-engineered, and pre-fabricated components will permit rapid installation and shorter disruptions to people and commerce.
- **Advanced Project Scheduling and New Estimating Techniques:** Through expanded use of electronic scheduling and reporting tools, the agencies can more closely monitor performance, validate estimates and anticipate project timelines.
- **Streamlining Environmental Permitting:** Programmatic agreements with environmental permitting agencies and statewide training workshops will streamline bridge project permitting while meeting environmental standards.
- **Single-Phase Construction:** Where appropriate to shorten project delivery time and save money, the agencies will permit a bridge to be completely closed during construction, avoiding the delays caused by working on a bridge while it is still open. Saving time greatly reduces costs.
- **Innovative Construction Contracting:** In conjunction with the Office of the Inspector General, a new design-build contract has been developed for the Program.



Design-Build contracting has already started on the Pleasant Street Bridge in Grafton.

For More On Innovation Visit www.mass.gov/acceleratedbridges

THE ABP PLAN

Developing a plan to virtually double the capacity of MassHighway and DCR to deliver public works projects has been an aggressive venture that has challenged the agencies to rethink processes and work together to chart a new course. Selecting the projects that will make up the plan has been equally intensive. Developing the list of projects involved, establishing criteria, prioritizing projects, developing estimates, and evaluating permitting, right-of-way and schedule issues, etc. The bill, filed in May 2008 was enacted by the Legislature in August 2008, funds were made available in October 2008, and the awarding of work is already underway on 41 projects totaling over \$175 million. Staffing plans are being implemented to bring on engineers and staff needed to get the job done. Fourteen design consulting contracts have been procured in advance of final project selection to expedite design. New program controls will be applied to troubleshoot problems. The Program is focused on ensuring minority and women business enterprise and workforce goals are achieved. Mindful of lessons learned from the Central Artery/Tunnel Project, the Accelerated Bridge Program has Commonwealth officials focused on running the Program in a transparent and accountable manner.

Massachusetts Highway Department
Accelerated Bridge Program
MHD Home Mass.Gov Home State Agencies State Online Services
Home About Program ScoreCard Recent News Contact
In the Spotlight
UPDATE Accelerated Bridge Program Update
Read the Accelerated Bridge Program Update about the current status of the Accelerated Bridge Program.
Over \$150 million of Projects Advertised
As of November 22, 2008, 36 construction contracts totaling \$154 million have been advertised as part of the Accelerated Bridge Program.
22 of these contracts account for 28 site specific Bridge Rehabilitation or Replacement Projects
14 contracts are for area, Corridor or Bundled preservation projects located statewide
8 Projects Have Received Notices to Proceed
24 projects have had bid-openings to

The Accelerated Bridge Program website will be kept up-to-date with project updates and information on all aspects of the Program.

way bridge projects from across the state with construction costs estimated at \$1.5 billion are included in the program. For a list of the specific projects included in the ABP visit www.mass.gov/acceleratedbridges.

The bridge list that comprises the 2009-2011 Accelerated Bridge Plan was developed from a combination of data analysis and professional judgment. The result is a mix of **replacement, rehabilitation and preservation** projects, providing the most cost-effective approach to improving the Commonwealth's bridges. The funding provided by the ABP has allowed several major bridge projects valued in excess of \$100 million each to be included in the plan. Preservation projects will prevent more minor deficiencies from growing into major problems requiring more costly work. The program was developed taking full account of the historical nature of its infrastructure, as well as the density of traffic around the Charles River Basin bridges. When completed, the program is expected to result in repair of 22 structurally deficient vehicular bridges and 5 structurally deficient pedestrian bridges and provide approximately \$100 million for preservation work on DCR's bridges. Nearly 500 MassHighway bridge projects from across the state with construction costs estimated at \$1.5 billion are included in the program.

TRANSPARENCY AND ACCOUNTABILITY

The Accelerated Bridge Program will ensure the taxpayer's dollars are maximized:

- Program Dollar Cap.** The total budget for the Program is capped at just under \$3 billion by law, meaning that no additional dollars can be spent without agreement by the Governor and the Massachusetts Legislature. Cost and schedule will be closely monitored to ensure that the cap is not exceeded.
- ABP Oversight Council.** The ABP Oversight Council will closely monitor and report every six months to the Legislature on the Program's compliance with the budget.
- State-of-the Art Program Controls.** The program managed by the Executive Office of Transportation has incorporated new schedule and cost control measures. An overall Program Controls Unit, independent of the design and construction process, will be created for the program as a whole to constantly review cost and schedule.
- ABP Tracking Against Current Fiscal Conditions.** The Secretary of Administration and Finance, in consultation with the State Treasurer and Commissioner of Revenue, must also report annually to the public and the Legislature that ABP projects will not adversely affect the Commonwealth's current fiscal condition, debt structure and bond ratings.

MASS HIGHWAY SCORECARD
MESSAGE FROM THE COMMISSIONER
Dear Citizens:
This year's quarterly ScoreCard builds on the work started in April with the release of our first ScoreCard. All the time we put of Governor Deval Patrick's release of our government and increase transparency. MassHighway will continue to work on the goal of increasing transparency and improving project delivery. This ScoreCard reports on some of the information reported in our first ScoreCard, including on more areas and adding new measures. In the coming ScoreCards, MassHighway will continue our work to increase transparency and to better assess our success in meeting our goals. This ScoreCard focuses on the following:
1. Ensuring the safety of our roadways is the number one priority of MassHighway. This ScoreCard provides important information on the safety of our highways and the state of some safety initiatives underway at MassHighway.
2. Ensuring mobility is essential to both citizens and the economy. This ScoreCard provides a more detailed picture on some of the work MassHighway is doing to improve mobility. We take an in-depth look at the E-11 traveler information system and other programs and MassHighway initiatives as part of our ongoing transportation systems.
3. Ensuring quality is essential to both citizens and the economy. This ScoreCard provides additional information on the condition of our roads and on our efforts to ensure that we are using the best practices and materials to build and maintain our roadways.
4. Ensuring accountability is essential to both citizens and the economy. This ScoreCard provides a detailed look at the condition of Massachusetts bridges, a report prepared on behalf of the Legislature. We also provide a detailed look at our efforts to ensure that we are using the best practices and materials to build and maintain our roadways.
The ScoreCard is a critical link in the Commonwealth's transparency network. This ScoreCard is a critical link in the Commonwealth's transparency network. This ScoreCard is a critical link in the Commonwealth's transparency network. This ScoreCard is a critical link in the Commonwealth's transparency network.
FOR TRAVELER INFO